


mortality rates. COVID-19 pandemic has served as a model that highlights the importance of universal and streamlined healthcare access.

Conflict of interest

Dr Koch received grants from Novartis and honoraria as speaker and travel fees from Novartis, Bristol Myers Squibb, Roche and Merck & Co. Dr Mondaca has received consulting fees from Roche and Foundation Medicine and honoraria as speaker from Bristol Myers Squibb and Merck & Co.

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A skin reaction with rust-like discolouration to mRNA COVID-19 vaccine

Editor

We describe a reaction that occurred in three cases after the BNT162b2 mRNA COVID-19 vaccine (Comirnaty®; BioNTech, Mainz, Germany and Pfizer, New York City, NY, USA). All cases were female, two of them aged 50 and one 51 years. All subjects had experienced a similar reaction after vaccination; part of their skin turned a brownish, rust-like colour. The respective locations of these reactions were (i) the left palmar area and right arm (Fig. 1), (ii) the dorsal surface of the left hand and (iii) the right palm and fingers (Fig. 2).

Two of these reactions occurred after the first vaccination and one after the booster. In the case of the booster, the reaction was observed approximately one and a half hours after the vaccination. In those subjects receiving only one vaccination, the reactions appeared the following night and after 5 days, respectively. All subjects are healthcare workers working with elderly people, and thus among the first to be vaccinated in Finland. All three had been previously vaccinated according to the Finnish national vaccination programme. They had also received the annual influenza vaccine



Figure 1 Reaction in left palm.



Figure 2 Reaction in right palm.

required for healthcare workers. Two of these individuals had a known IgE-mediated allergy to pollen, and one of them also had a contact allergy to nickel. Those with a history of IgE allergy had taken paracetamol (acetaminophen) prior to vaccination, and the other one had also taken cetirizine an hour before. All the reactions subsided in 24 h, due to which no biopsy specimen could, for practical reasons, be taken. All three had pain at the vaccination site for two days as another adverse event; two out of three also experienced some flu-like symptoms the following day.

We have no idea of the possible mechanism for the phenomena, but, interestingly, all patients were of the same age. Pollen allergy is very common in Finland, and the relevance of the atopic diathesis remains unclear. A delayed reaction to another mRNA-based vaccine (mRNA-1273) has been reported,¹ but the reactions described are of a classic inflammatory nature. A similar reaction has also been reported for the BNT162b2 vaccine.^{2,3} In a registry-based study with 414 reported cases with cutaneous reaction, altogether four cases of petechiae were reported⁴ but not described in more detail.

The reaction we now describe would suggest a haemosiderin pigmentation, but vanishes too rapidly to be explained as such. We suspect that this reaction is a local capillary leakage due to

the vaccination and some kind of immunologic reaction located in the dermis/epidermis junction.

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Dermatoses caused by face mask wearing during the COVID-19 pandemic

Editor

We present 6 patients with different dermatoses caused by face mask wearing during the COVID-19 pandemic. Physical examination revealed lesions only under masks.

Two 20 years old females presented to our clinic with the pustules and papules on the face area. Due to the COVID-19 pandemic, the patients began to use neoprene mask with daily change. The first papules and pustules appeared in the mask area about two weeks of mask using. The diagnosis of mask induced acne ('maskne') was made (Fig. 1a–c).

Two 25 and 23 years old patients presented with irregular pink-yellow patches with sharp borders and small serous crusts. No concomitant disorders, professional harm and bad habits